

SA1



RAFFLES GIRLS' PRIMARY SCHOOL
SEMESTRAL ASSESSMENT (1)
2005

Your score out of 100 marks		
	Class	Level
Highest score		
Average score		
Parent's Signature		

Name : _____ Class: P4 _____ Index No: _____

12th May 2005 SCIENCE Att: 1 h 30 min

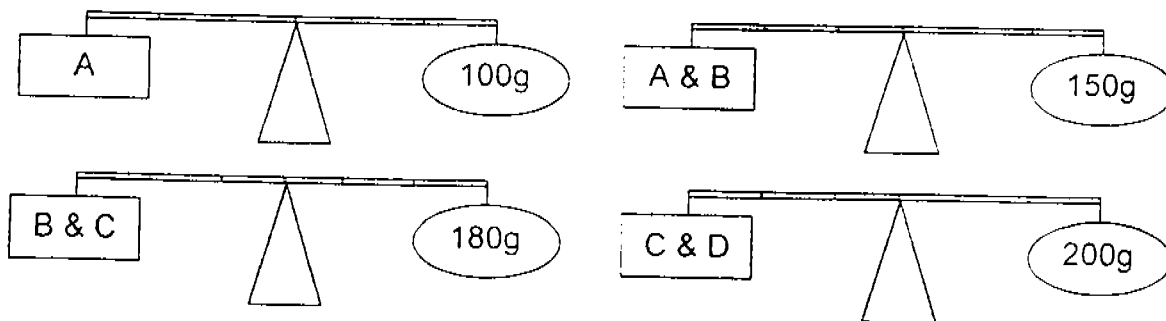
Section A (25 x 2 marks)

There are 25 questions in this section. Answer all of them. For each question, 4 suggested answers numbered 1, 2, 3 and 4 are given. Choose the most suitable answer and shade its number 1, 2, 3 or 4, as provided.

1. Which of the following is matter?

- (1) air
- (2) light
- (3) heat
- (4) shadow

2. Study the diagrams below carefully.

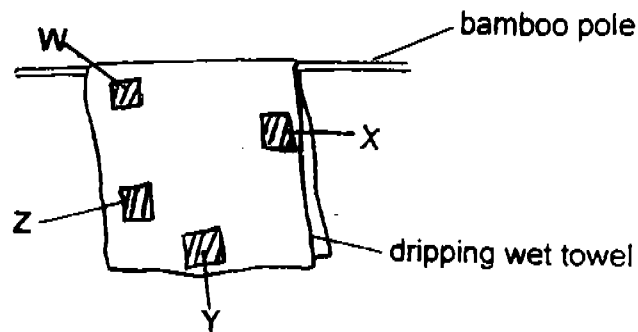


Which one of the following objects has the smallest mass?

- (1) A
- (2) B
- (3) C
- (4) D

3. Which one of the following statements is true about mass?
- (1) It is the size of an object.
 - (2) It is the shape of an object.
 - (3) It is the volume of an object.
 - (4) It is the amount of matter in an object.
4. Suling's teacher heats a beaker of ice cubes until all the ice in it melts. Which one of the following statements about Suling's observation of the ice cubes is **incorrect**?
- (1) The ice cubes change in size.
 - (2) The ice cubes change in shape.
 - (3) There is no change in their state.
 - (4) There is no change in their colour.
5. Which of the following statements are properties of matter?
- A. All matter is visible.
 - B. All matter has mass.
 - C. All matter is a living thing.
 - D. All matter occupies space.
- (1) A and C only
 - (2) B and D only
 - (3) A, B and C only
 - (4) B, C and D only
6. Which one of the following statements is **false**?
- (1) Evaporation takes place all the time.
 - (2) Steam can be seen when water boils.
 - (3) Condensation occurs when water vapour cools.
 - (4) The temperature of ice remains the same during melting.

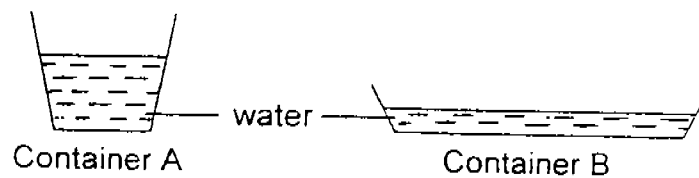
7. Ethan hung a piece of dripping wet towel onto a bamboo pole to dry as shown in the picture below.



He noticed that not all parts of the towel would dry at the same time although they received the same amount of sunlight.

Which one of the shaded parts will dry first?

- (1) W
 - (2) X
 - (3) Y
 - (4) Z
8. Shanti pours the same amount of tap water into two containers, A and B, as shown in the pictures below.



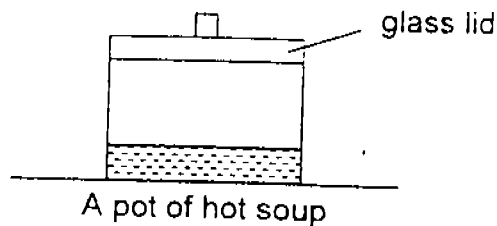
What can Shanti do such that water from Container B evaporates at a slower rate than water in Container A? She can _____.

- (1) place both containers in the refrigerator
- (2) cover Container A with a plate but not Container B
- (3) place Container A in a cupboard and Container B under a fan
- (4) place Container A under the sun and Container B in the shade

9. Anna heated some wax. She observed that the wax started to melt after a few seconds. What could she conclude from her observation?

- (1) The melting point of wax is 0°C .
- (2) The boiling point of wax is 100°C .
- (3) The wax lost heat during the process.
- (4) The wax gained heat during the process.

10. Mrs Yong left some hot soup in a metal pot. She then covered the pot with a glass lid as shown in the diagram below.



After a few minutes, she noticed that some water droplets were formed on the _____.

- A. inner surface of the pot
- B. outer surface of the pot
- C. top surface of the glass lid
- D. bottom surface of the glass lid

- (1) A and D only
- (2) C and B only
- (3) B, C and D only
- (4) A, B, C and D

11. Which of the following form part of the water cycle?

- A. Formation of clouds
- B. Evaporation of water on the road
- C. Giving out of water vapour by plants
- D. Drying up of perspiration on your skin

- (1) A and B only
- (2) C and D only
- (3) B, C and D only
- (4) A, B, C and D

12. A group of pupils made the following statements about clouds.

- Kay: Clouds are matter.
Sean: Clouds are full of water vapour.
Ahmad: Clouds condense and form rain.
Clement: Clouds are part of the water cycle.

Which pupils made the correct statements?

- (1) Kay and Sean only
- (2) Sean and Ahmad only
- (3) Kay and Clement only
- (4) Ahmad and Clement only

13. Two-thirds of the Earth's surface is covered with water. However, there are still many campaigns to educate the public on water conservation in Singapore. Why is it so?

- A. People in Singapore are not using water wisely.
- B. Water is important for the survival of all living things.
- C. Although Singapore is surrounded by sea, the sea water cannot be used directly.

- (1) A only
- (2) C only
- (3) B and C only
- (4) A, B and C

14. Madeline uses the water that was used to do the laundry to wash the floor. Which of the following statements are correct?

- A. She conserves water by reusing the water.
- B. She conserves water by reclaiming the water.
- C. She conserves water by reducing the use of clean water.
- D. She conserves water by recycling the water that was used to do the laundry.

- (1) A and C only
- (2) B and D only
- (3) A, C and D only
- (4) B, C and D only

15. Tom put some guppies, pebbles, goldfish and plastic plants into an aquarium. The number of fish, pebbles and plants in the next twenty weeks is shown in the table below.

Things	Week 0	Week 10	Week 20
guppies	40	60	90
pebbles	40	40	40
goldfish	50	50	70
plastic plants	10	10	10

What can you conclude from the information given?

- (1) Only living things can grow.
 - (2) Only living things can reproduce.
 - (3) Only living things can move by themselves.
 - (4) Only living things can make their own food.
16. Belinda grouped some animals into two groups as shown in the table below.

Group 1	Group 2
tiger	cow
eagle	turtle
crocodile	rabbit

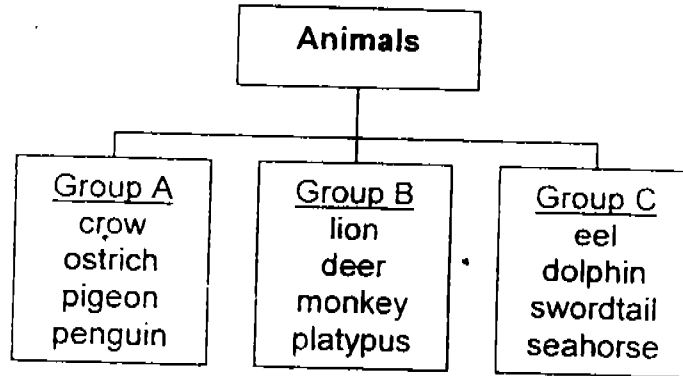
How did she group the animals?

- (1) According to their habitats
 - (2) According to how they move
 - (3) According to their body coverings
 - (4) According to the type of food they eat
17. Animals need to move for various reasons. Which of the following statements are true?
- A. Animals move to look for food.
 - B. Animals move to look for water.
 - C. Animals move to look for shelter.
- (1) A and B only
 - (2) A and C only
 - (3) B and C only
 - (4) A, B and C

18. Which one of the following statements is true about mammals?

- (1) All mammals live on land.
- (2) All mammals respond to changes.
- (3) All mammals have three body parts.
- (4) All mammals give birth to their young.

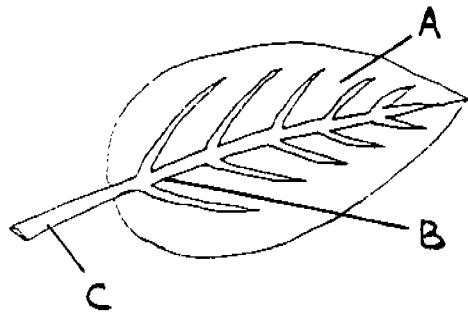
19. Study the classification table below.



Which animal has been **wrongly** classified?

- (1) eel
- (2) ostrich
- (3) dolphin
- (4) monkey

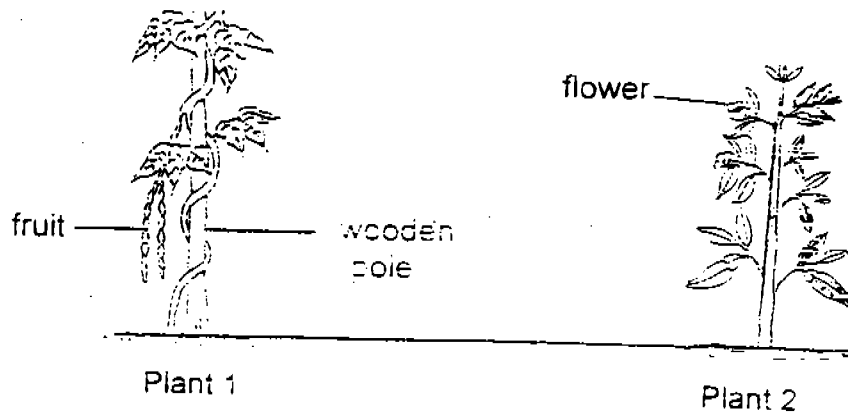
20. A, B and C are parts of a leaf as shown below.



Which one of the following shows the correct parts of the leaf?

	main vein	leaf stalk	leaf blade
(1)	A	B	C
(2)	B	C	A
(3)	C	A	B
(4)	C	B	A

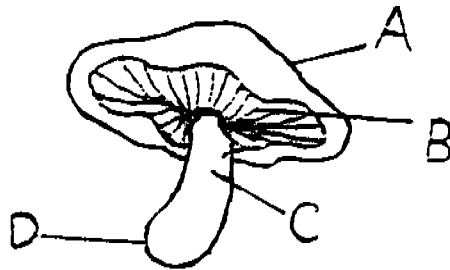
21. The picture below shows two plants growing in the garden.



Which of the following statement(s) is/are correct?

- A. Both plants have roots.
 - B. Both plants have weak stems.
 - C. Both plants are flowering plants.
- (1) A only
 - (2) B only
 - (3) A and C only
 - (4) B and C only
22. Which one of the following pairs consists of only **non-flowering** plants?
- (1) rose and hibiscus
 - (2) mushroom and waterlily
 - (3) maidenhair fern and moss
 - (4) African violet and bracket fungus

23. Look at the picture below.



Where are the spores found?

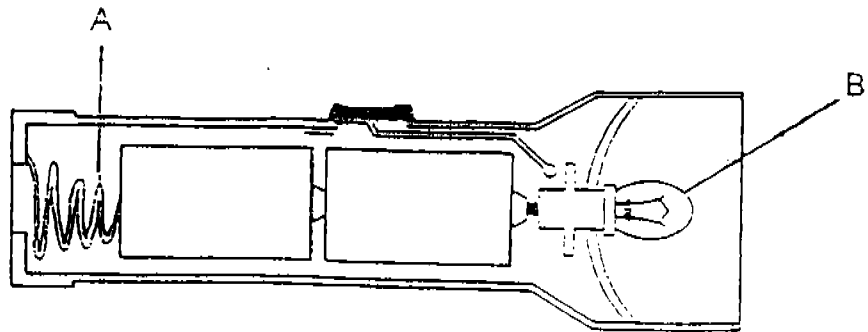
- (1) A
- (2) B
- (3) C
- (4) D

24. Which of the following materials come from plants only?

- A. silk
- B. latex
- C. cotton
- D. feather

- (1) A and B only
- (2) A and C only
- (3) B and C only
- (4) B and D only

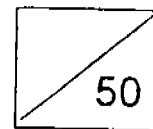
25. The picture below shows a torch.



What are the materials used to make parts A and B?

	Part A	Part B
(1)	metal	glass
(2)	plastic	glass
(3)	metal	plastic
(4)	rubber	plastic

Name: _____ () Class: P4 _____



Section B (50 marks)

There are 20 questions in this section. Answer all of them. Write your answers in the spaces provided.

26. Study the table below carefully.

Properties	Object A	Object B
has a definite volume	yes	yes
has a definite shape	yes	no
can be seen	yes	yes

(a) Compare objects A and B. What is the difference between the two objects? (1 m)

(b) Give an example of object A. Do not mention the state of matter. (1 m)

(c) Name a matter that is not visible. (1 m)

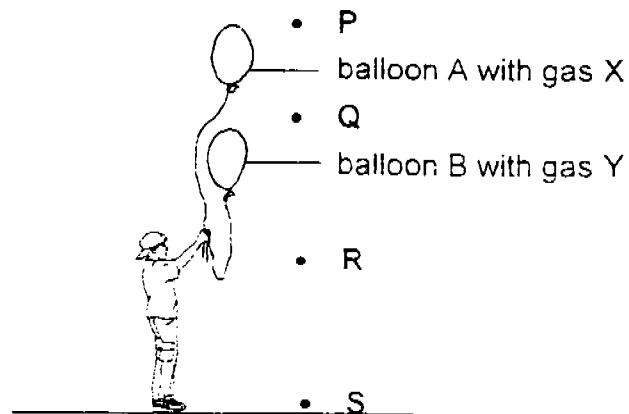
27. Water can exist in three interchangeable states of matter. Give an example of X and Y. (2 m)

solid state	liquid state	gaseous state
X	water droplets	Y

X: _____

Y: _____

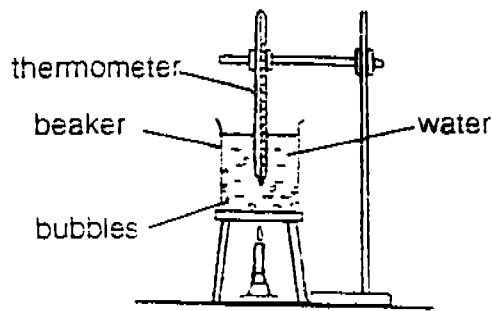
28. Mrs Lee gave Allan two identical deflated balloons, attached with strings of equal length. He filled balloon A with gas X and balloon B with gas Y. Both balloons contained the same amount of gas.



- (a) Explain why Balloon A floats at a higher level than Balloon B. (1 m)

- (b) P, Q, R and S are positions marked by Allan from the ground. If he has another balloon that is filled with air, what is the likely position (P, Q, R or S) of this balloon? (1 m)

29. Perry boiled a beaker of water as shown in the diagram below.



After a while, he noticed that small bubbles were seen in the water of the beaker. The temperature of the water at the time when the bubbles were seen was less than 100°C .

- (a) Name the gas in the bubbles. (1 m)

- (b) Soon, Perry saw some white 'clouds' at the mouth of the beaker.

- (i) What are these white 'clouds'? (1 m)

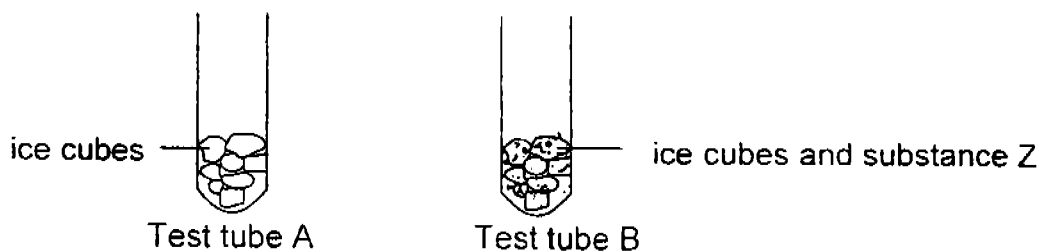
- (ii) Name the process that formed these white 'clouds'. (1 m)

30. June had 2 cups, A and B. She poured 50 ml of hot tea into each cup. She blew on the surface of the tea in Cup A and did nothing to the tea in Cup B.

- (a) Which cup of tea would cool faster? (1/2 m)

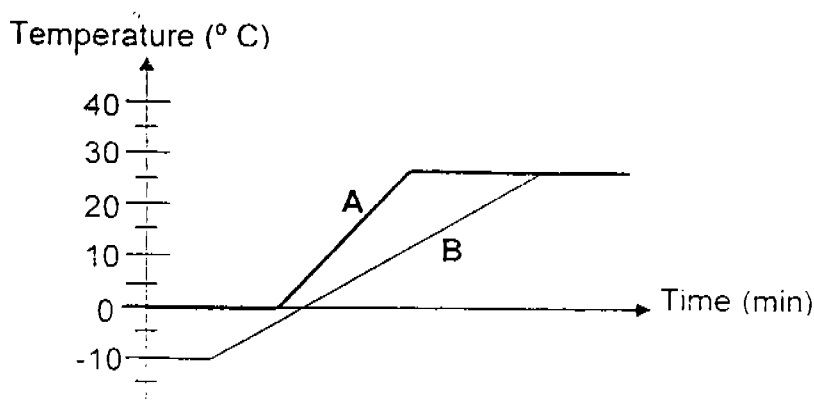
- (b) Give a reason for your answer in part (a). (1 m)

31. Test tubes A and B contain an equal amount of ice cubes. A substance, Z, is added to the ice cubes in Test tube B as shown below.



Both test tubes are left on a stand after that.

The graph below shows the changes in temperature of the contents in test tubes A and B over time.



From the graph,

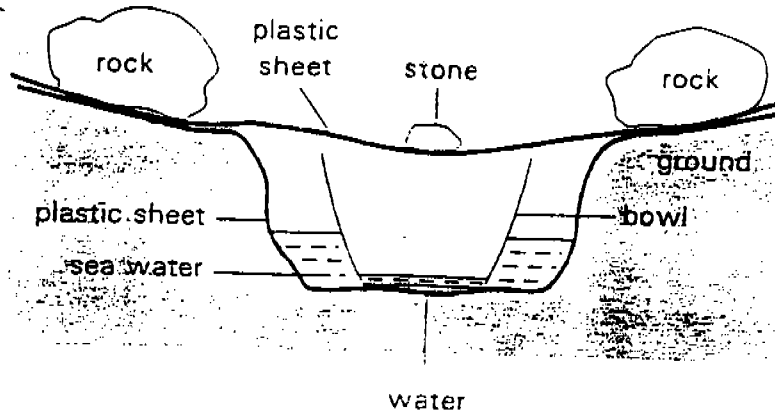
- (a) what is the melting point of the ice cubes in Test tubes A and B? (1 m)

(i) Test tube A : _____ (ii) Test tube B : _____

- (b) what is the effect of substance Z on the melting point of ice cubes? (1 m)

- (c) compare the rate at which the ice cubes in Test tubes A and B melt. (1 m)

32. Meiling dug a hole in the ground and set up an experiment to obtain fresh water from sea water as shown in the picture below.



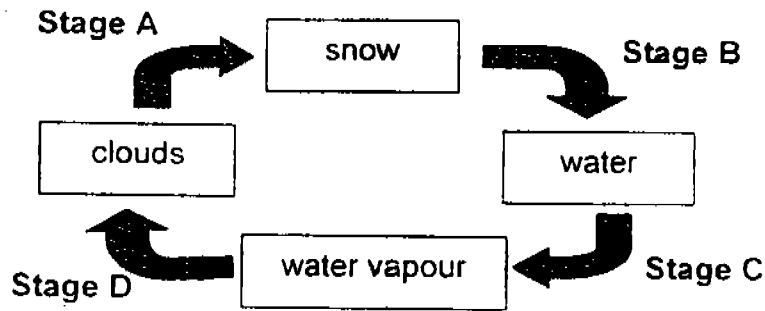
After a few hours, she noticed that she had collected only a small amount of fresh water in the bowl.

- (a) Suggest a change Meiling can make to the experiment such that **more** fresh water can be collected **within the same time frame**. (1 m)

- (b) Explain how this change, your answer in (a), can help her to collect more fresh water. (1 m)

33. What is the role of the Sun in the water cycle? (1 m)

34. Look at the water cycle shown below.



(a) Write down the process that takes place at each of these stages in the table below. Stage A is done for you. (3 m)

Stage (A, B C or D)	Process
A	freezing
B	
C	
D	

(b) Which of these stages, A, B, C or D, involve(s) heat gained during the process? (2 m)

35. (a) The plants in the river are not likely to survive if a big patch of grass is removed along the river. Why is it so? (1½ m)

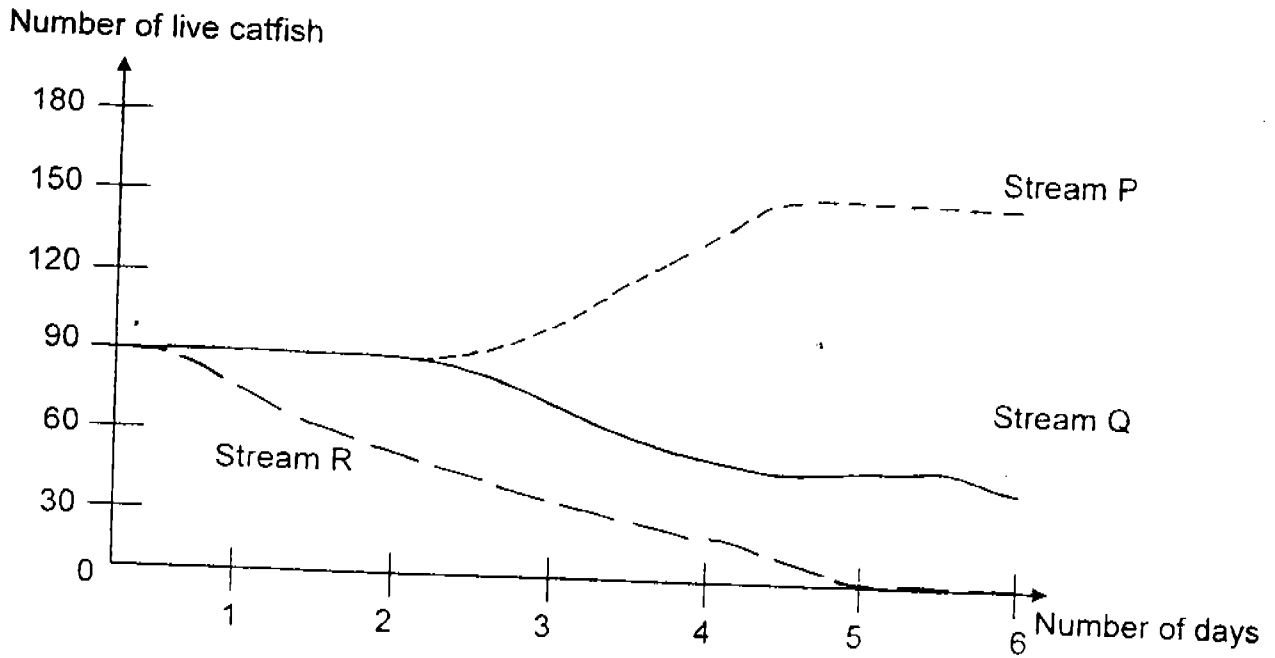
(b) Name another activity that will cause water pollution. (1 m)

36. Water can be conserved through reducing, reusing and recycling. Tick (✓) in the correct box to show how water is conserved for each situation given. (2 m)

Situations	Ways to conserve water		
	reduce	reuse	recycle
(a) Repair a leaking tap immediately.			
(b) Purify sewage water to get drinking water.			
(c) Avoid washing the car under a running hose.			
(d) Water the plants using water from the aquarium.			

37. In an experiment, 3 cages each with the same number of live catfish were lowered separately into 3 streams P, Q and R. The catfish were not able to escape from these cages.

The number of live catfish in the cages was counted over 6 days. The graph below shows the results:



Based on the information given on the graph, indicate whether each of the following statements is 'True', 'Not true' or 'Not possible to tell'.

Put a tick (✓) in the correct box. (2 m)

Statement	True	Not true	Not possible to tell
(a) Stream R was badly polluted by oil spill.			
(b) All the catfish in Stream R died due to diseases.			
(c) All the catfish in Stream Q died on the 6 th day.			
(d) There were more live catfish in Stream P than the other two streams after the 5 th day.			

38. Look at the classification table below.

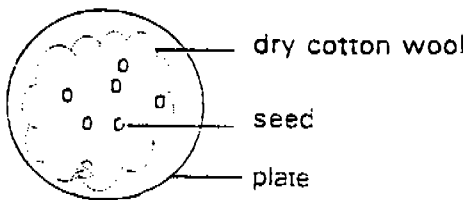
Living things			
Animals	Plants	Group Q	Group R
lion	rose	Jew's ear	bacteria
whale	Hibiscus	toadstool	yeast

Give a suitable heading for Group Q and Group R. (2 m)

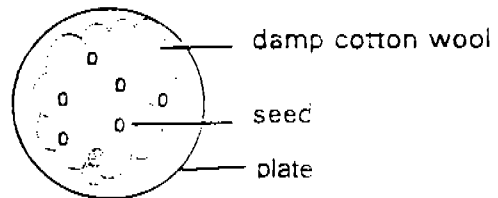
Group Q: _____

Group R: _____

39. Ahmad set up an experiment as shown in the pictures below.



Set-up A



Set-up B

He left the 2 set-ups, A and B, next to an open window. After a week, he observed that the seeds in one of the set-ups grew into seedlings.

(a) In which set-up would the seeds grow into seedlings? (1 m)

(b) What could Ahmad conclude from his experiment? (1 m)

40. Some animals are put into 2 groups, A and B, as shown below.

Animals	
Group A	Group B
guppy	hen
elephant	platypus
rabbit	angelfish
cat	Q

(a) Explain how these animals are grouped. (1 m)

(b) What animal could Q be? (1 m)

(c) State a difference between the hen and platypus in Group B. Do not compare size. (1 m)

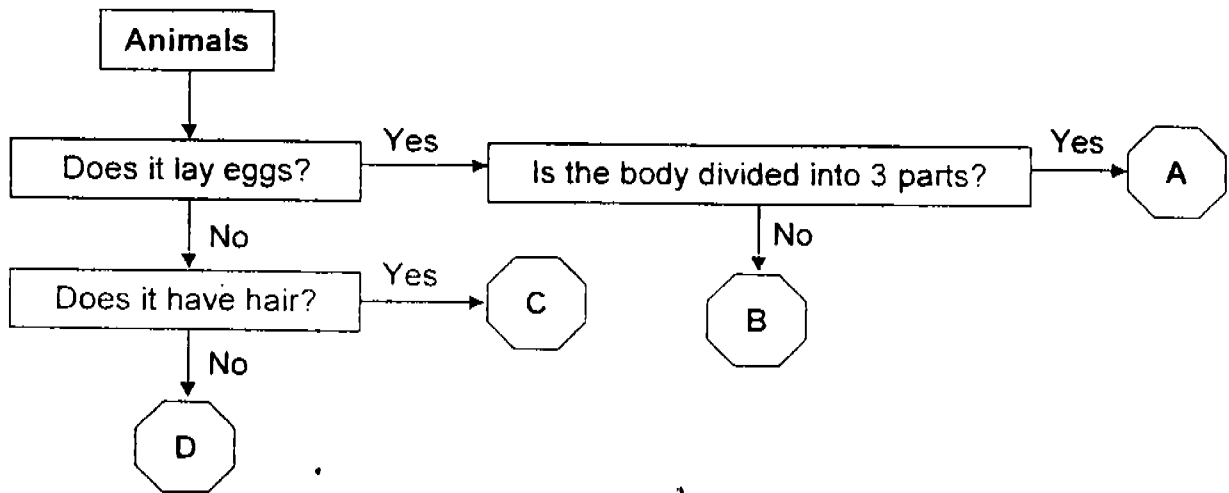
41. Look at the leaf shown below.



Describe the leaf using the table below. (2 m)

Characteristics	Description
Shape of leaf	
Edge of leaf	

42. Study the flow chart below carefully.



(a) State 2 characteristics of Animal C. (1 m)

(i) _____

(ii) _____

(b) Write the letter, A, B, C or D, which represents the following animals. (1 m)

(i) turtle : _____

(ii) guppy : _____

(c) Joshua made the following statement.

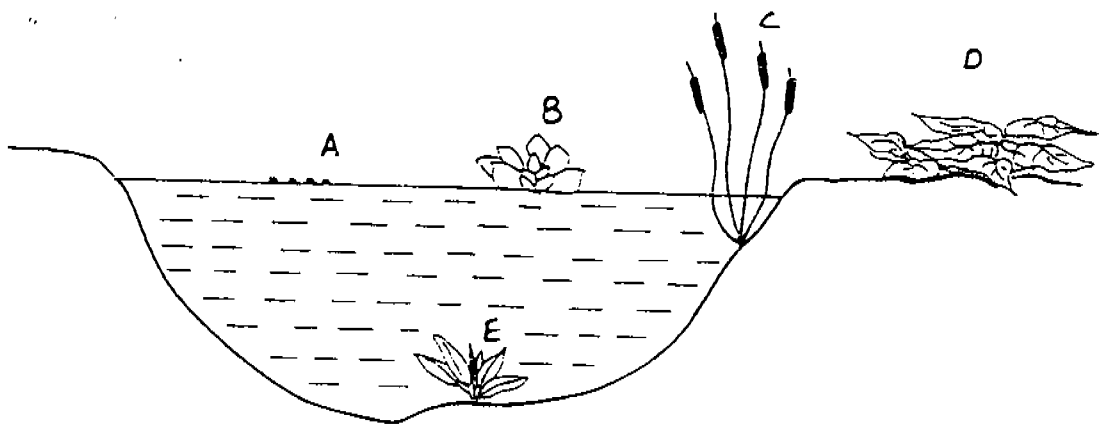
“Animal B is an insect.”

Explain why the statement made by Joshua is **incorrect**. (2 m)

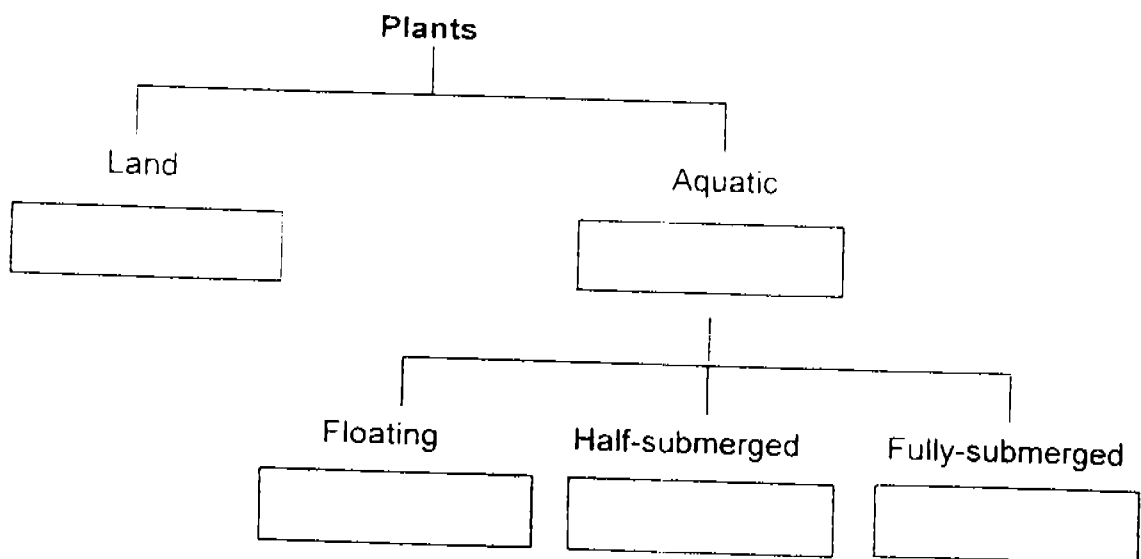
43. Write 'T' for true statements and 'F' for false statements in the boxes provided. (2 m)

(a)	Yeast is a micro-organism.	
(b)	Spores are micro-organisms.	
(c)	All micro-organisms need sunlight, air and water to survive.	
(d)	Bacteria is an example of a micro-organism which can be both useful and harmful to men.	

44. Five different types of plants A, B, C, D and E, are found growing near and in a pond.



Classify all the plants by writing its letters, A, B, C, D or E, in the boxes provided in the classification table below. You may write more than one letters in each box. (4 m)



45. Sue conducted several tests on materials, A, B, C and D, and tabulated her results below.

Properties	A	B	C	D
ability to stretch	no	yes	no	yes
breaks easily when dropped	yes	no	no	no
waterproof	yes	yes	yes	no

- (a) What material could Sue use to make a swimming cap which can keep her hair dry? (1/2 m)

- (b) Could Sue give a toy made of material A to a baby? (1/2 m)

- (c) Give a reason for your answer in (b). (1 m)

- END OF PAPER -

Setters: Mdm Janice Yeo
Mdm Poh Bee Leng
Mdm Ho Sheen Yee

SA1
Raffles Girls Primary School
Semestral Assessment (1)
Science

Answer Key (Science SA1 2005)

Section A (25 X 2 m)

1.	1
2.	2
3.	4
4.	3
5.	2

6.	2
7.	1
8.	4
9.	4
10.	1

11.	4
12.	3
13.	4
14.	1
15.	2

16.	4
17.	4
18.	2
19.	3
20.	2

21.	3
22.	3
23.	2
24.	3
25.	1

Section B (50 m)

No.	Marks	Answers	Remarks
26(a)	1	Object A has a definite shape while Object B does not.	
26(b)	1	Stone, rock or any solid	0m for spelling error
26(c)	1	Air or other invisible matter	0m for spelling error
27	2	X: ice cubes/snow Y: water vapour/steam	Deduct 1/2m for spelling error
28(a)	1	Gas Y has a bigger mass/heavier than gas X. Balloon A is heavier/has a bigger mass than balloon B. (0m)	
28(b)	1	S	
29(a)	1	water vapour (1m) / air (1/2 m) / oxygen etc (1/2 m)	
29(b)	2	(i) (tiny) water droplets (ii) condensation	sp err - 1/2m
30(a)	1/2	Cup A	
30(b)	1	The tea in Cup A loses heat at a faster rate [1] The tea in Cup A evaporates faster [1/2].	
31(a)		(i) 0 ° C (ii) - 10 ° C	wrong/no units - 0m
31(b)	1	It lowers the melting point of ice.	
31(c)	1	The ice (cubes) in Test tube A melts faster than in Test tube B.	
32	2	(a) Change to a container with a narrower smaller mouth/opening (b) The water in the hole can evaporate faster (1/2) with a bigger exposed surface area (1/2). (a) Place some ice on the plastic sheet. (b) Condensation can take place faster (1/2) when the temperature is lower (1/2). (a) Dig a wider hole. (b) The water in the hole can evaporate faster (1/2m) with a bigger exposed surface area (1/2m). (a) Shine a lamp/torch onto the water in the hole. (b) The water can evaporate faster(1/2m) at a higher temperature(1/2m).	(a) wrong --> (b) wrong
33.	1	It provides heat (1/2) for evaporation to take place/ for water to change its state from a liquid state to a gaseous state (1/2m)	
34(a)	3	B - melting, C - evaporation, D - condensation	Sp err -1/2m

34(b)	2	B, C	Each extra ans minus 1m
35(a)	1 ½	The soil will be washed/blown into the river./ The water becomes cloudy/muddy/polluted (1/2m). As a result, plants cannot photosynthesise/ make food (1/2m) as they are not able to receive light from the sun (1/2m).	
35(b)	1	Littering / Dumping / Oil Spills Deforestation (0m)	Sp err -1/2m
36	2	(a) reduce (b) recycle (c) reduce (d) reuse	
37	2	(a) (b) Not possible to tell (c) Not True (d) True	
38	2	Group Q: Fungi Group R: Micro-organisms	
39(a)	1	B	
39(b)	1	Seeds need water (1/2) to grow into seedlings (1/2).	Air- 0m
40(a)	1	Animals in Group A give birth to its young (1/2 m) but Animals in Group B lay eggs (1/2 m). According to the way they reproduce (1/2 m).	
40(b)	1	duck / spiny anteater / penguin / any other animal that lays eggs	
40(c)	1	A platypus is a mammal but a hen is a bird (1/2 m) A platypus has hair / (characteristics of a mammal) but a hen has feathers / (characteristics of a bird) (1/2 m)	
41(a)	1	It gives birth to its young / does not lay eggs (1/2m) and has hair (1/2m)	
41(b)	1	(i) B (ii) D	
41(c)	2	All insects have 3 body parts (1) but Animal B does not have(1)	
41	2	oval (1) jagged / toothed / serrated(1m)	
43	2	(a) T (b) F (c) F (d) T	
44	4	D (1m) A, B, C, E (1m or 0m) A,B (1/2m each) C (1/2m) E (1/2m)	No marks for remaining 3 boxes if water plants are labelled wrongly.
45	2	(a) B [1/2m] (b) No [1/2m] (c) : breaks easily [1m]	

Setters: Mdm Ho SY
Mdm Poh BL
Mdm Janice Yeo